SHARP

MEAN, STANDARD DEVIATION, LINEAR REGRESSION

PC-1002

STATISTICS

ROM # 104

X-M / A

This key performs all the appropriate summations needed for the data entered.

CM / B

After entering the data with the [A] key, this key will find the mean of the x's ($\bar{x}$) and the y's ($\bar{y}$), the number of variables entered (n), the standard deviation of the x's (σ_x) and the y's (σ_y), the standard error of the mean of the x's (S.E.), and the Z score of the x's.

RM / C

For the data entered with the [A] key, the [C] key can be used to find the correlation coefficient (r), the slope (m), the y intercept (b) and the projected y_o.

M+ / D

Unwanted or incorrect data can be deleted by using the [D] key in conjunction with the [A] key. This key also clears the machine for a new problem.

STATISTICS EXAMPLE

I. (F) (D)
(D) - clears the machine for new data

II. Enter 4 - Touch [↕] (4,6)
Enter 6 - Touch [F] [A]
Enter 6 - Touch [↕] (6,8)
Enter 8 - Touch [A]
Enter 8 - Touch [↕] (8,10)
Enter 10- Touch [A]

III. Enter 0

(F) (B) = 6 = $\bar{x}$
(↕) = 3 = n
(B) = 2 = σ_x
(↕) = 1.1547 = S.E.

Enter 3 = x_0
(B) = -1.837 = z

Enter 1

(F) (B) = 8 = $\bar{y}$
(↕) = 3 = n
(B) = 2 = σ_y

IV. (F) (C) = 1 = r
(C) = 1 = m
(↕) = 2 = b

Enter 3 = x_0
(C) = 5 = y_0

TO DELETE DATA AFTER THE ABOVE HAS BEEN ENTERED:

I. Enter 6 - Touch [↕] (6,8)
Enter 8 - Touch [F] [D] [F] [A]

II. Enter 0

(F) (B) = 6 = $\bar{x}$
(↕) = 2 = n
(B) = 2.828 = σ_x
(↕) = 2 = S.E.

Enter 1

(F) (B) = 8 = $\bar{y}$
(↕) = 2 = n
(B) = 2.828 = σ_y

III. (F) (C) = 1 = r
(C) = 1 = m
(↕) = 2 = b

TITLE A:

OPERATION: Summation Σ

1. Enter x variable

   Touch [↕]

2. Enter y variable

   Touch [F] [A] (to sum: x, y, x^2, y^2, xy, n)

3. Repeat Steps 1 and 2 for all x,y data.

NOTE: 1. x variable remains in x register
y variable remains in y register

2. For unpaired enter x, touch [↕], enter 0 for y
3. Clear machine before entering completely new data only. (See [D] key)

TITLE B:

OPERATION: Computations Using Data Derived in "Title A"

1. Enter 0

   Touch: [F] [B] for $\bar{x}$ (mean of x's)
   Touch: [↕] for n
   Touch: [B] for σ_x (Std. Dev. of x's)
   Touch: [↕] for S.E. (Std. Error of Mean of x's)

   Enter x value

   Touch: [B] for Z score of x.

2. Enter 1

   Touch: [F] [B] for $\bar{y}$
   Touch: [↕] for n
   Touch: [B] for σ_y

ITLE C:

OPERATION: Correlation Coefficient: r
Slope and y intercept: m,b
Projection: y_p

1. Touch: [F] [C] for r
   Touch: [C] for m
   Touch: [↕] for b

2. Enter x value

3. Touch: [C] for y_p (predicted value)

ITLE D:

OPERATION: Delete
Clear

I. To delete a set of data*

   1. Enter x variable
   2. Touch [↕]
   3. Enter y variable
   4. Touch [F] [D]
   5. Touch [F] [A] (Data entered is now deleted from summations)

II. To clear machine for completely new data

   1. Touch [F] [D]
   2. Touch [D]

NOTE: For unpaired data, skip steps 1 and 2.

struction for pROM Installation

Remove cord, and turn PC-1002 face down.

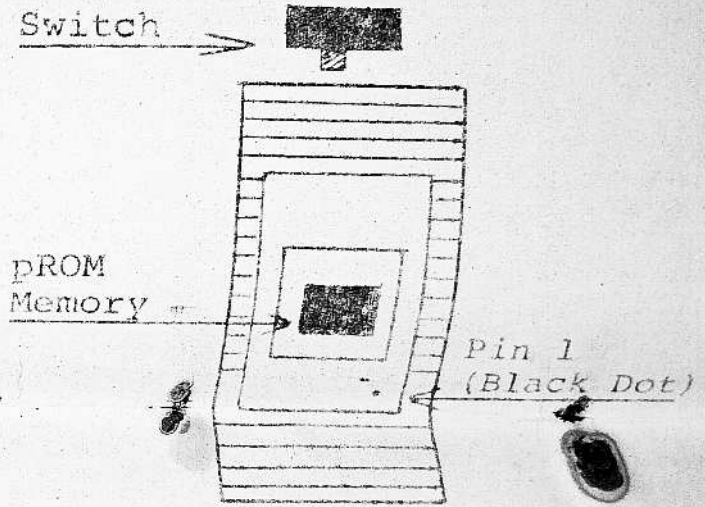
Remove protective cover from pROM socket.

Gently ease pROM into socket with pin 1 (black dot) edge furthest away from switch as shown in diagram.

Replace protective shield, and machine is ready for operation.

To remove pROM, use screwdriver or letter opener to pry each end up gradually and slowly.

AUTION: Reverse installation may destroy pROM.



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3.10.75
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T. 040- [redacted]

Kü/Ds. den 24.9.75

Betr.: Tischrechner PC - 1002

Sehr geehrte Herren,

wir haben den o.g. Rechner bei Ihrer Geschäftsstelle in Braunschweig gekauft. Er ist mit dem "statistik-Programm (ROM 104) ausgestattet.

Zum Löschen falsch eingegebener Daten ist in der Programmbeschreibung folgendes angegeben :

Programmen muß heißen

1. Enter x variable
2. Touch ↓
3. Enter y variable
4. Touch FD
5. Touch FA

1. Enter x variable
2. Touch FD
3. Enter y variable
4. Touch FA

Befolgt man diese Anweisung, gibt die Maschine einen falschen $\bar{y}$ und $\hat{y}$, r, m, b sind gelöscht. Ein anderer PC-1002 arbeitete ebenso. Wo liegt der Fehler ? Ich bitte um baldige Auskunft.

Mit freundlichem Gruß
i.A.

[redacted]